



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

JUN 19 2000

400 Seventh Street, S.W.
Washington, D.C. 20590

DOT-E 12431

EXPIRATION DATE: May 31, 2002

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: TITEQ Corporation
Palmdale, CA
2. PURPOSE AND LIMITATIONS:
 - a. This exemption authorizes the manufacture, mark, sale and use of a non-DOT specification cylinder conforming with all regulations applicable to a DOT 4BA specification, except as specified herein, for the transportation in commerce of the Division 2.2 materials authorized by this exemption. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.302, 173.304, 175.3, in that a non-DOT specification cylinder is authorized as specified herein.

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5. BASIS: This exemption is based on the application of TITEQ Corporation dated February 15, 2000, and additional information dated April 12, and May 8, 2000 submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Material Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Dichlorodifluoromethane or Refrigerant gas R12	2.2	UN1028	N/A
Chlorodifluorobromomethane or Refrigerant gas R12B1	2.2	UN1974	N/A
Chlorotrifluoromethane or Refrigerant gas R13	2.2	UN1022	N/A
Tetrafluoromethane or Refrigerant gas R14	2.2	UN1982	N/A
Bromotrifluoromethane or Refrigerant gas R13B1	2.2	UN1009	N/A
Dichlorofluoromethane or Refrigerant gas R21	2.2	UN1029	N/A
Chlorodifluoromethane or Refrigerant gas R22	2.2	UN1018	N/A
1,2-Dichloro-1,1,2,2- Tetrafluoroethane or Refrigerant gas R114	2.2	UN1958	N/A
Chloropentafluoroethane or Refrigerant gas R115	2.2	UN1020	N/A
Hexafluoroethane, compressed or Refrigerant gas R116	2.2	UN2193	N/A
1-Chloro-1,2,2,2- tetrafluoroethane or Refrigerant gas R124	2.2	UN1021	N/A
1-Chloro-2,2,2-trifluoroethane or Refrigerant gas R133a	2.2	UN1983	N/A
1,1,1,2-Tetrafluoroethane or Refrigerant gas R134a	2.2	UN3159	N/A

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Proper Shipping Name/ Hazardous Material Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Dichlorodifluoromethane and Difluoroethane azeotropic mixture or Refrigerant gas R500	2.2	UN2602	N/A
Chlorodifluoromethane and Chloropentafluoroethane mixture or Refrigerant gas R502	2.2	UN1973	N/A
Chlorotrifluoromethane and Trifluoromethane azeotropic mixture or Refrigerant gas R503	2.2	UN2599	N/A
Hexafluoropropylene or Refrigerant gas R1216	2.2	UN1858	N/A
Refrigerant gases, n.o.s.	2.2	UN1078	N/A
Refrigerant gases, n.o.s. (Trichlorofluoromethane, R11)	2.2	UN1078	N/A
Refrigerant gases, n.o.s. (Trichlorotrifluoroethane, R113)	2.2	UN1078	N/A
Refrigerant gases, n.o.s. (Dichlorotrifluoroethane, R123)	2.2	UN1078	N/A
Liquefied and non-liquefied compressed gases, authorized for DOT 4BA specification cylinders	2.2	As appropri ate	N/A

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7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification stainless steel cylinder conforming with DOT Specification 4BA (§§ 178.35 and §178.51) except as follows:

§ 178.35(f) Markings.

(1) Each cylinder must be marked with the following information:

(i) The cylinder must be marked "DOT-E 12431" instead of DOT-4BA followed by the service pressure.

* * * *

§ 178.51(a) Type, size and service pressure.

Cylinder must be cylindrical in shape, with integrally formed spherical or elliptical heads. Cylinder ends closed by spinning are not authorized. Shells are to be seamless cylindrical with integrally formed heads, and joined by welding of one circumferential seam. The maximum water capacity is 90 pounds, and the maximum service pressure is 350 psig.

§ 178.51(b) Steel. Material of construction must be ASTM A 240 Type 304, Type 316, or Type 316L stainless steel. The steel analysis must conform to the following:

<u>Stainless steel</u>	<u>Composition (%)</u>		
	<u>304</u>	<u>316</u>	<u>316L</u>
Carbon (Max.)	0.08	0.08	0.03
Manganese (Max.)	2.00	2.00	2.00
Phosphorus (Max.)	0.045	0.045	0.045
Sulphur (Max.)	0.030	0.030	0.030
Silicon (Max.)	0.75	0.75	0.75
Chromium	18.0-20.0	16.0-18.0	16.0-18.0

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Nickel	8.0-10.5	10.0-14.0	10.0-14.0
Molybdenum	----	2.0-3.0	2.0-3.0
Copper (Max.)	----	----	----
Nitrogen (Max.)	0.10	0.10	0.10

§ 178.51(g) Heat treatment. Heat treatment is not required.

b. TESTING - Cylinders must be requalified in accordance with the requirements of § 173.34(e) as applicable to DOT 4BA specification cylinders. Cylinders used in recovered refrigerant service are herein defined by DOT as being in corrosive service. Sections 173.34(e)(11), 173.34(e)(12), and 173.34(e)(13) do not apply to cylinders used for recovered refrigerants.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this exemption for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this exemption.

b. A person who is not a holder of this exemption, but receives a package covered by this exemption, may reoffer it for transportation provided no modifications or changes are made to the package and it is offered for transportation in conformance with this exemption and the HMR.

c. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

d. Each packaging manufactured under the authority of this exemption must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Exemptions and Approvals for a specific manufacturing facility.

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- e. A current copy of this exemption must be maintained at each facility where the package is manufactured under this exemption. It must be made available to a DOT representative upon request.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo aircraft only, and passenger-carrying aircraft.
10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each aircraft used to transport packages covered by this exemption. The shipper must furnish a copy of this exemption to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, Parts 171-180.
 - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when this exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must also inform the AAHMS, in writing, as soon as practicable of any incidents involving the package and shipments made under this exemption.

Issued in Washington, D.C.



Robert A. McGuire
Acting Associate Administrator for
Hazardous Materials Safety

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(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

Copies of exemptions may be obtained from the AAHMS, U.S. Department of Transportation, 400 7th Street, S.W., Washington, DC 20590-0001, Attention: Records Center, 202-366-5046 or at <http://hazmat.dot.gov>

PO: cwf